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6 Monitors

General Information

This type of equipment is not officially supplied by the United States Information Agency (USIA) to the sites. Generally, the site purchases needed television (TV), monitor, or video cassette recorder (VCR) equipment locally using its own funds.

Video Transmission Standards

Three types of video transmission standards are used. They are:

- National Television Standards Committee (NTSC);
- Séquence Couleur a Mémoire, Color Sequence with Memory (SECAM); and
- Phase alteration by line (PAL).

Each standard maximizes color video reception by transmitting the video signal as a series of scanned lines, flashed at a given rate of speed.

NTSC

The NTSC (United States) standard consists of 525 scanning lines per "picture" frame. Flashed at a rate of 30 frames per second, each frame has two alternating fields of 262½lines each. This standard can transmit video to both color and monochrome television sets, but at the cost of overall picture quality.

PAL

The PAL (German) standard minimizes the NTSC problems affecting picture quality while avoiding SECAM's production problems. This is the video standard used by more than 40 countries around the world.

WORLDNET broadcasts its signal in either NTSC or PAL formats, depending on the standard used in the broadcast area.

SECAM

The SECAM (French) standard consists of 625 scanning lines per "picture" frame. Flashed at a rate of 26 frames per second, each frame has two alternating fields of 312½lines each. An adjustment to the TV's linear control is needed to reduce the picture height so that the correct aspect ratio of the 625-line signal can be properly displayed on a 525-line screen. This standard has difficulty accommodating many production standards used in broadcasting today.

Television, Video Monitor, VCR, and Audio Amplifier Selection Guidelines

Televisions/Video Monitors

Because of the differences in color video standards used for satellite transmissions and the further variations of color TV and video monitor standards used by different countries, a multistandard television/monitor is necessary to receive NTSC, PAL, and SECAM formats in true color on a single set.

Multistandard equipment is available from:

- Sony;
- Panasonic;
- Hitachi;
- JVC;
- Telefunken; and
- Barco.

When selecting a multistandard TV/monitor, make sure that the unit processes the 3.58 MHz NTSC frequency. A few units are able to processes the 4.43 NTSC frequency only, which means that regular color NTSC programming will appear in black and white.

Most multistandard sets have an automatic color standards selection feature that automatically picks the correct standard. Many units also have either switch-selectable or automatic-selection features for 110 or 220 volts AC.

Videocassette Recorders (VCRs)

The companies mentioned above as manufacturers of multistandard televisions/monitors also make multistandard videocassette recorders. The same video standards mentioned earlier cause problems for those who would like to view VCR tapes taped in countries with incompatible color video standards. Make certain that the selected unit can record and play back in all standards. Some VCRs will play back tapes prerecorded in any standard, but do not have the right circuitry to record all standards.

Audio Amplifiers

Audio signals are not subject to the multiple standards that exist for video signals. The audio amplifier must be able to respond to the frequency at which the audio signal is broadcast or sound quality will be degraded or lost entirely.